

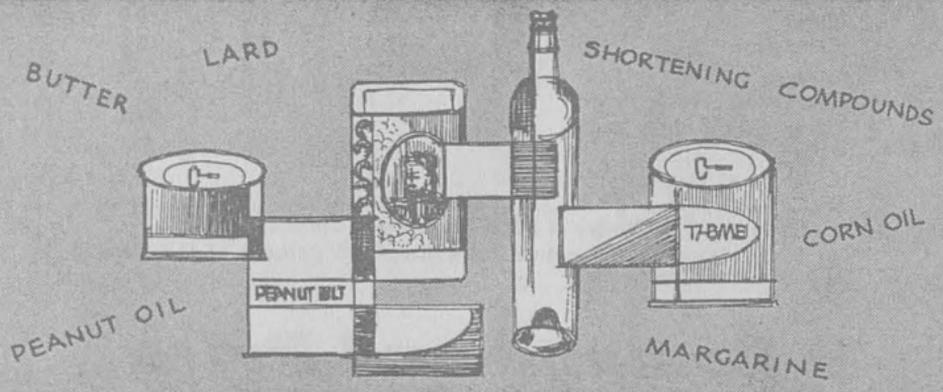
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# Know

## FATS and OILS



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# ***Butter***

Minnesota ranks first in the production of butter. It is made exclusively from milk or cream, or both, with or without common salt, and with or without coloring matter. Butter contains not less than 80 per cent by weight of milkfat.

The butterfat in butter is an excellent source of natural vitamin A. A deficiency of vitamin A causes changes in the eye, skin, and other parts of the body and an increased susceptibility to infections.

Butterfat contains unsaturated fatty acids. Research is being done at the present time to find out the relationship between fatty acids and the utilization of the B vitamins.

In addition to its food value butter is highly prized for its flavor. It contributes to the goodness and palatability of foods. As all or a portion of the fat in cookies, cakes, and pastries, it enhances the flavor of these foods.

## ***Butter Grading***

The score or grade of butter is determined by examining the butter for flavor and aroma, body and texture, color, and salt content. By the use of other tests or procedures approved by the Commissioner of Agriculture for the State of Minnesota, the quality of butter is ascertained in whole or in part.

In Minnesota, it is unlawful to sell, offer, expose for sale, or have in possession with intent to sell any butter at retail unless it has been graded and labeled with the following grades:

Grade, Minnesota, AA—93 score

Grade, Minnesota, A—92 score

Grade, Minnesota, B—90 score

Grade, Minnesota, undergrade—all butter below Minnesota B

Butter from outside Minnesota sold within the state must comply with the state grade and labeling standards. Unless butter is marked with United States AA, A, or B grades, the grade should be indicated in a manner equivalent to the requirements for butter manufactured and sold within this state.

## ***Lard***

Minnesota ranks third in the United States in the production of hogs. Lard is the fat rendered from the fatty tissues of the hog.

At retail, nearly all lard is marketed in cartons, pails, or cans. It is required by the Federal Food, Drug, and Cosmetic Act that the weight be stamped on the carton. Packaged lard and lard compounds

are labeled "U. S. Inspected and Passed by the U.S.D.A." This stamp means that the materials from which the product is made have been examined and passed by the Federal Meat Inspection Service as pure and wholesome. All products containing lard must be carefully and exactly labeled, for example: "pure lard," "refined and hydrogenated lard," and "pure lard, beef fat added."

## *Margarine*

Before 1940 some foreign vegetable oils and considerable animal fats were used in the manufacture of margarine. Since that time, margarine has been produced largely from domestic soybean and cottonseed oil. In 1954, about 60 percent of the ingredients in margarine was soybean oil. Minnesota ranks fifth in the nation in the production of soybeans.

Soybean and cottonseed oil are interchangeable in manufacturing margarine. Peanut oil and edible tallow are used in margarine to a limited degree.

There is a wide range in price of the different margarines on the market. This is due to the variation in the composition of margarines. Margarines with a high percentage of animal fat are less expensive.

The composition of margarine is listed on the carton so it is easy for a food shopper to determine what kind of margarine she wishes to buy, and to know what she is getting. All margarines are 80 percent fat, and the rest of the ingredients are usually skim milk, salt, and a small amount of preservative. The ingredients used in margarine and shortening in the United States are given in table 3.

**Table 3. Fats and Oils Used in Margarine and Shortenings**

	Percent contributed by various fats and oils			
	Margarine		Shortening	
	Average 1945-49	1954	Average 1945-49	1954
<b>Vegetable oils</b>				
Cottonseed .....	55.0	35.9	29.9	32.5
Soybean .....	38.7	60.1	49.8	46.6
Coconut .....	1.5	0.5	2.2	0.8
Other .....	2.8	2.0	8.4	6.4
Total vegetable oils .....	98.0	98.5	90.3	86.3
<b>Animal fats</b>				
Edible tallow .....	0.0	0.0	3.0	4.1
Oleo oil and oleo stearine .....	0.8	0.9	1.2	0.4
Neutral lard .....	0.6	0.6	5.4	7.2
Other fats .....	0.6	0.0	0.1	0.0
Total animal fats .....	2.0	1.5	9.7	11.7
Glycerides .....	---	---	---	2.0

# ***Hydrogenated Fats or Shortenings***

Hydrogenated fats and compounds, often referred to as shortening compounds, include many of the well known brands of household cooking fats which are on the market.

Hydrogenation is the process by which hydrogen is added to oils to form hard fats. A shortening compound may be an all-vegetable oil compound or a mixture of animal fats and vegetable fats. Shortening compounds may include soybean oil, cottonseed oil, corn oil, and in the last few years lard.

Shortening compounds have no flavor or odor, because the fats and oils used in preparing them are refined before they are processed. These products can be kept almost indefinitely without refrigeration and they have a "high smoking point." That means they stand high cooking temperatures without beginning to smoke. There are many variable factors, such as food particles in used fat, that affect the smoking temperature.

## ***Oils***

The various oils used for food come from seeds and nuts. The source, characteristics, and major use of some of the food oils are given in table 4.

**Table 4. Source, Characteristics, and Major Uses of Food Oils**

<b>Oil</b>	<b>Source</b>	<b>Characteristics</b>	<b>Major uses</b>
Soybean	Soybeans	Distinct flavor even after processing. Characteristic odor.	Margarine Shortening compounds Packing canned fish
Cottonseed	Cottonseed	Bland and tasteless when processed.	Margarine Shortening compounds Cooking oil Salad oil
Corn	Corn	No odor or flavor when processed. Golden-yellow in color.	Cooking oil Salad oil
Olive	Olives	Light body. Straw or golden color. Characteristic flavor and aroma.	Cooking oil Salad oil
Peanut	Peanuts	Light color and agreeable flavor of peanuts.	Cooking oil Salad oil



## ***Care of Fats in the Home***

It is desirable to check the label to see if the fats can be kept on the pantry shelf or if they should be refrigerated.

Although some fats are flavorless, most fats easily become carriers of other flavors. This characteristic of absorbing flavors is the reason fats should be kept in tightly covered containers and protected from strongly flavored food and strong odors during storage.

When fats and oils take up oxygen from the air they become rancid. Rancidity is hastened by light, air, moisture, and heat. This is another reason why fats should be kept in a tightly covered container in a cool, dark place.

Fats which contain moisture develop molds unless they are kept very cold. If a mold on fat is carefully removed with a knife, and the remaining fat appears normal, this remaining fat can be used.

Strain used fat to be stored. However, new fat should not be put into a can containing old fat which may already be slightly rancid, because the fresh fat will acquire the rancid flavor.

Strain fats which have been used for deep fat frying through one or more layers of cloth or a dairy filter before storing. If the fat is badly scorched or has acquired an off-flavor from other strongly flavored foods, it cannot be reconditioned.

### **Fats Are Essential**

Fats are a necessary part of our daily diets. They are our most concentrated form of food energy.

Of all the nutrients, fats yield the most calories per unit of weight. They furnish more than twice as many calories as the same weight of either carbohydrates or proteins. Fats supply the body with lasting and satisfying energy.

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